

REMARKS

In response to the March 9, 2006 Office action, the title has been amended, Claims 1-9 have been canceled without prejudice, and independent Claim 10, which is the only remaining independent claim, has been amended. In addition, Claims 14-17 have been added. Support for the amendments to Claim 10 and the addition of new Claims 14-17 is found at least in the specification between pages 15 and 18 and in Figures 6-8. Accordingly, Claims 10-17 are pending. Reconsideration and withdrawal of the outstanding objection and rejections are respectfully solicited in view of the foregoing amendments and the following remarks.

The Examiner requires a new title that is indicative of the claimed invention. In response, while not conceding the propriety of the objection, Applicant has amended the title so that it is even more indicative of the claimed invention. Therefore, Applicant respectfully requests that the title objection be withdrawn.

Page 4 of the Office Action rejects Claims 10-12 under 35 U.S.C. § 103(a) as allegedly being unpatentable over the patent to Sugiki (U.S. Patent No. 5,990,948) in view of the Examiner's Official Notice regarding the forming of "a solid state image pickup element, including photoelectric conversion units arranged two-dimensionally, on a single semiconductor chip". In addition, Claim 13 is rejected under 35 U.S.C. § 103 as allegedly being unpatentable over the patent to Sugiki in view of the Examiner's Official Notice and the patent to Nam (U.S. Patent No. 5,477,070).

At the outset, Applicant submits that the Office has not satisfied its burden of proof to establish the facts of which Official Notice is taken. More specifically, MPEP § 2144.03(A) requires that such facts be instantly and unquestionably demonstrated:

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. (emphasis in the original).

But here, the Office Action merely asserts that it is well known to provide “a solid state image pickup element, including photoelectric conversion units arranged two-dimensionally, on a single semiconductor chip” (page 4, lines 1-3 of the March 9, 2006 Office Action). The Office Action does not provide instant and unquestionable demonstration of such a chip. Therefore, Applicant respectfully requests that the Office cite a reference showing this feature.

In addition, in response to the rejections, independent Claim 10 has been amended. Applicant submits that as amended, Claim 10 is allowable over the cited art for the following reasons.

Independent Claim 10 relates to an image pickup apparatus comprising a solid-state image pickup element formed on a single semiconductor chip. The solid-state image pickup element includes photoelectric conversion units arranged two-dimensionally, a plurality of CCDs adapted to transfer charges generated by the photoelectric conversion units, each of the plurality of CCDs being arranged correspondingly to each line of photoelectric conversion units, a plurality of charge detection circuits adapted to detect the charges from the CCDs and supplying corresponding signal levels, each of the plurality of

charge detection circuits being arranged correspondingly to each CCD, and a plurality of A/D conversion circuits adapted to generate digital signals from the differences between the signal levels supplied by the charge detection circuits and noise levels of the photoelectric conversion units, respectively, each of the A/D conversion circuits being arranged correspondingly to each charge detection circuit.

Claim 10 has been amended to recite a plurality of circuit elements, each providing a ramp-shaped reference voltage to a respective one of the plurality of charge detection circuits in response to receiving a digital signal from a respective one of the plurality of A/D conversion circuits.

In contrast, the patents to Sugiki and Nam are not understood to disclose or suggest a plurality of circuit elements, each providing a ramp-shaped reference voltage to a respective one of a plurality of charge detection circuits in response to receiving a digital signal from a respective one of a plurality of A/D conversion circuits, as recited by amended Claim 10. In addition, the facts of which Official Notice is taken, also fail to disclose or suggest the plurality of circuit elements recited by amended Claim 10.

To establish a prima facie case of obviousness, MPEP § 2142 requires the Office to cite art that discloses or suggests all the claimed features. Since, here, the patents to Sugiki and Nam, and the facts of which Official Notice is taken, are not understood to disclose or suggest the plurality of circuit elements recited by amended Claim 10, the Office has not established a prima facie case of obviousness against amended Claim 10. Therefore, Applicant respectfully requests that the rejection of Claim 10 over this art be withdrawn.

Furthermore, Applicant respectfully submits that there has been no showing of any indication of motivation in the cited documents that would lead one having ordinary skill in the art to arrive at the above-discussed plurality of circuit elements in combination with the other claimed features. Therefore, the motivation-to-combine criteria of MPEP § 2142 has also not yet been satisfied with respect to amended independent Claim 10. For this additional reason, Applicant submits that the Office has not established a prima facie case of obviousness against independent Claim 10 and for this additional reason, Applicant respectfully requests that the rejection of Claim 10 over these citations be withdrawn.

The dependent claims are also submitted to be patentable because they are dependent from independent Claim 10 discussed above and because they set forth additional aspects of the present invention. Therefore, separate and individual consideration of each dependent claim is respectfully requested. For example, dependent Claims 14-17 respectively recite that each of the plurality of A/D conversion circuits comprises a counter, that each of the plurality of circuit elements is adapted to receive output range switching information, that each of the plurality of circuit elements comprises a D/A converter, and that each of the plurality of charge detection circuits comprises a floating diffusion amplifier, the source of which receives an output of its respective D/A converter and the gate of which receives charges from its respective CCD. Applicant respectfully submits that these features are not disclosed or suggested by the patents to Sugiki or Nam or the facts of which Official Notice is taken. Therefore, these claims are allowable both because they depend from allowable Claim 10 and because they recite features that are patentable in their own right.

In view of the above amendments and remarks, the application is now in allowable form. Therefore, early passage to issue is respectfully solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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